

WHAT WE CLAIM IS:

1. A finder for an image pickup device, which makes use of a variable hologram element using a polymer dispersed liquid crystal or a polymer stabilized liquid crystal.

5 2. A display for an image pickup device, which makes use of a variable hologram element using a polymer dispersed liquid crystal or a polymer stabilized liquid crystal.

3. Variable-focus glasses, which make use of a variable hologram element using a polymer dispersed liquid
10 crystal or a polymer stabilized liquid crystal.

4. An optical pickup, which makes use of a variable hologram element using a polymer dispersed liquid crystal or a polymer stabilized liquid crystal.

5. An optical measuring device, which make use of a
15 variable hologram element using a polymer dispersed liquid crystal or a polymer stabilized liquid crystal.

6. A decentration measuring device, which makes use of a variable hologram element using a polymer dispersed liquid crystal or a polymer stabilized liquid crystal.

20 7. A variable hologram element, which comprises a photonic crystal and a liquid crystal.

8. An endoscope, wherein an image is formed by a digital hologram.

9. A variable hologram element using a polymer
25 dispersed liquid crystal or a polymer stabilized liquid crystal, wherein a substrate therefor has a lens or mirror action.

09769750-012601

10. A variable hologram element using a polymer dispersed liquid crystal or a polymer stabilized liquid crystal, which meets at least one of conditions (1), (4), (8), (10) and (11).

5 11. A variable hologram device, wherein a plurality of variable hologram elements, each using a polymer dispersed liquid crystal or a polymer stabilized liquid crystal, are laminated together with a transparent electrode interposed therebetween.

10 12. A finder for an image pickup device, which makes use of a variable hologram element.

13. The finder for an image pickup device according to claim 12, which further includes a light source having a short half bandwidth.

15 14. The finder for an image pickup device according to claim 5, which further satisfies at least one of conditions (5) and (6).

15. A finder for a digital camera, which makes use of a variable hologram element.

20 16. A single-lens reflex, Galilean, Albada or Keplerian type finder, which makes use of a variable hologram element.

17. A wearable information device making use of a variable hologram element, which is used with a light source having a short half bandwidth.

25 18. A wearable information device making use of a variable hologram element, wherein said variable hologram element is used for an adapter or case.

03760750-012501

19. A wearable information device making use of a variable hologram element, wherein said wearable information device may be used in the form of a head mount display and has functions of glasses and a display.

5 20. A display for an image pickup device, which makes use of a variable hologram element.

21. The display for an image pickup device according to claim 20, which further includes a light source having a short half bandwidth.

10 22. The display for an image pickup device according to claim 20, wherein said variable hologram element is used for an adapter or case.

23. Variable-focus glasses, which make use of a variable hologram element.

15 24. The variable-focus glasses according to claim 23, which further includes a light source having a short half bandwidth.

20 25. The variable-focus glasses according to claim 23, which are used with a light source having a short half bandwidth.

26. An optical pickup, which makes use of a variable hologram element.

27. An optical pickup for disks with varying thicknesses, which makes use of a variable hologram element.

25 28. The optical pickup according to claim 26 or 27, which is used with a light source having a short half bandwidth.

09760750-012601

29. An optical measuring device, wherein a variable hologram element is used for optical path switching.

30. An optical measuring device, which makes use of a variable hologram element.

5 31. The optical measuring device according to claim 29 or 30, which is used with a light source having a short half bandwidth.

32. A decentration measuring device, wherein a variable hologram element is used for optical path switching.

10 33. A decentration measuring device, which makes use of a variable hologram element.

34. A variable hologram element, which comprises a liquid crystal impregnated into interstitial voids in a photonic crystal.

15 35. A variable hologram element, which comprises a photonic crystal and a liquid crystal.

36. An endoscope, wherein an image is formed by a digital hologram.

20 37. The endoscope according to claim 36, which further satisfies condition (12).

38. The endoscope according to claim 36, wherein an image is formed by a digital hologram using infrared light.

39. The endoscope according to claim 38, wherein visible light is observable.

25 40. The endoscope according to claim 36, which further includes a trichromatic light source.

41. The endoscope according to claim 38, which further satisfies condition (13).

09769750.012601
199210.092696

42. The endoscope according to any one of claims 36 to 41, which further includes a half-silvered mirror prism.

43. A head mount display, which makes use of a variable hologram element and has functions of glasses and a display.

5 44. An optical measuring device, which makes use of a variable hologram element having an optical path switching function.

45. A device, wherein the hologram element according to any one of claims 12, 15, 16, 20, 23, 26, 27, 29, 30, 32 and
10 33 is constructed, using a polymer dispersed liquid crystal or a polymer stabilized liquid crystal.

09763750.0712601